



Report
on the
Administration
of the
District Water Works Dept.
for the year 1347 Fasli—(1938 A.D.)

by

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Approved by the President of the Water Board,
District Water Works Department,
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Proceedings of the Hon'ble Members of the Water Board Water Board
Branch.
in their 33rd meeting held on 14th June 1939
(8th Amardad 1348 F.) at the State
Executive Council Hall, at 10-00 a.m.

PRESENT:

1. MR. R. M. CROFTON, I.C.S.,
Director-General and Secretary, Revenue Department,—In the Chair.
2. MR. W. V. GRIGSON, I.C.S.,
Special Officer, Revenue Department.
3. MR. LIAKATULLAH KHAN, H.C.S.,
Financial Secretary.
4. MR. AHMAD MIRZA,
Chief Engineer and Secretary, P.W.D.
5. DR. H. HYDER ALI KHAN, F.R.C.S. (EDIN.),
Director, Medical and Public Health Department.
6. MR. SYED BADRUDDIN HUSSAIN, H.C.S.,
Deputy Revenue Secretary.

Sir Theodore Tasker, C.I.E., O.B.E., I.C.S., Revenue Member, and Nawab Mahdi Yar Jung Bahadur, Finance Member, were engaged in a session of the Council at the time after forming the Board. Raja Shamraj Rajwant Bahadur was away from Hyderabad.

Messrs. Samiullah Shah, B.Sc. (Hons.) (Manchester), M.I.E. (India), M. INST. C.E. (London), Special Engineer, District Water Works, and C. C. Paul, O.B.E., M.I.C.E., Special Engineer, Local Funds Department, attended the meeting.

ITEM No. 16/1939.—*Administration Report of the District Water Works for the year 1347 F.*

REVIEW.

The Administration Report was forwarded by the Special Engineer, District Water Works, on the 14th Ardibehisht 1348 F.

1. *Control and Establishment.*—After his appointment as Chief Engineer Mr. Ahmad Mirza, Special Engineer, District Water Works, handed over charge of the department on 29th Azar 1347 F., to Mr. Samiullah Shah who was the Principal of the Osmania Engineering College, Hyderabad-Deccan. The latter held charge of the department throughout the year.

Mr. Samiullah Shah also held charge of the Well Sinking Department and of the Local Funds Department in his capacity as Superintending Engineer. Later on Mr. C. C. Paul, Special Engineer, was entrusted with the Local Fund works on 19th Dai 1347 F.

Mr. Sri Hari Ram a senior Supervisor was promoted to the newly-created post of the Sub-Engineer on the Special Survey Party which was sanctioned by the Water Board (Resolution No. 280, dated 2-5-1347 F.), for completing the investigation of towns taken on the Special Programme for expediting the completion of the water supply and drainage works.

The scale of Establishment maintained in the District Water Works in 1347 F., is shown in appendix No. 2, and of the Establishment of the Special Survey Party is shown in appendix No. 2 (a).

2. *Expenditure.—Establishment—Control and Direction.*

(a) The Establishment charges of the office of the Special Engineer and of the investigation and construction subdivisions are compared with the expenditure on Works as shown below; the permissible ratio in the P.W.D. being 22½ per cent.:—

—	1347 F.	1346 F.	1345 F.	1344 F.
	Rs.	Rs.	Rs.	Rs.
Establishment ..	85,120	65,324	90,681	79,858
Works ..	11,08,019	5,68,494	5,92,780	4,86,687
Total ..	11,93,139	6,33,818	6,83,461	5,66,545
Ratio between the Establishment charges and the Works, p.c. .	7.58%	11.45%	15.29%	16.4 %

(b) The expenditure on direction and control on account of the combined establishments for the District Water Works in the offices of the Special Engineer, District Water Works, the Chief Engineer, P.W.D., the Examiner of Accounts, P.W.D., and the Water Board Branch of the Revenue Secretariat, is compared below with the total outturn of work:—

—	1347 F.	1346 F.	1345 F.	1344 F.
	Rs.	Rs.	Rs.	Rs.
Expenditure—combined establishment.	1,06,955	82,381	1,06,208	94,490
Do Works ..	11,08,019	5,68,494	5,92,780	4,86,687
Total ..	12,14,974	6,50,875	6,98,988	5,81,177
Ratio of establishment to works ..	9.56%	14.49%	19.92%	19.4%

The ratio fixed according to the P.W.D. standard is $24\frac{1}{2}$ per cent.

The details of the above expenditure are shown in appendices No. 3-5.

The total expenditure on the construction of water supply and drainage schemes from the commencement of the department in 1338 F., to the end of 1347 F., is Rs. 58,61,147-11-0%. The details are explained in the appendix No. 6, and in the graph attached to this Report.

The total expenditure under the head of Non-recurring grants to the end of 1347 F., was Rs. 25,547 out of the allotment of Rs. 30,000. The details are shown in the appendix No. 7.

3. Sanction of fresh Projects in 1347 F.

1. The Bhima scheme for Gulbarga Rs. 8,65,000
(WB. Res. No. 260).
2. The Water Supply Scheme for Nizamabad
Rs. 6,30,000 (WB. Res. No. 301).
3. The Drainage Scheme for Nizamabad Rs. 1,40,500
(WB. Res. No. 188).

4. The Water Supply Scheme for Tuljapur
Rs. 2,32,000 (WB. Res. No. 298).
5. The Drainage Scheme for Tuljapur Rs. 60,000
(WB. Res. No. 299).

Total	..19,27,500
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6. The electricity scheme for Tuljapur costing Rs. 37,000 was also sanctioned by the Water Board, Resolution No. 298.

4. *Investigation of fresh Projects in 1347 F.*

(a) *Detailed Surveys and Investigations.*

1. The Nizamabad Water Supply Scheme.
2. The Sedam Drainage Scheme.
3. The Mahboobnagar Water Supply Scheme.
4. The Drainage Scheme of Mahboobnagar.
5. The Khammamet Water Supply Scheme.
6. Do Drainage Scheme.
7. The Yadgir Water Supply Scheme.
8. Do Drainage Scheme.

(b) *Preliminary Surveys.*

1. The Water Supply for Chincholi town.
2. Do Karimnagar town.
3. Do Mominabad (revised).
4. Do Bodhan (revised).

The details of all the schemes investigated from the inception of the department are shown in appendix No. 8.

5. The Water Supply and the Drainage Works completed and the maintenance of the towns controlled by the Special Engineer are:—

1. Jalna.
2. Aurangabad.
3. Latur.
4. Raichur.
5. Nander.
6. Seram.
7. Manvi.

The details are shown in appendix No. 4.

The Special Engineer says that the completed works have been efficiently maintained and the inhabitants of these towns are supplied with wholesome water. The demand for protected water supply is growing day by day.

6. The Water Supply and Drainage Works in progress during the year 1347 F.

1. The Water Supply Scheme of Warangal.
2. The Drainage do do
3. The remodelling of Gulbarga.
4. The Drainage Scheme of Gulbarga.
5. The Water Supply Scheme of Osmanabad.

In connection with drainage scheme of Warangal the scheme for the town improvement of the Matwada Section of the Warangal City costing Rs. 1,52,000 contributed by the Local Funds, was in progress.

The details of all the works in progress during the year 1347 F., are stated in the Administration Report—pages 12-16.

The Special Engineer reports that the year 1347 F. has been unique in the history of the District Water Works both on account of its wide-spread activities and considerable expenditure on works. This is the first time in the history of the District Water Works that the water supply and drainage schemes of three district towns, viz., Warangal, Gulbarga and Osmanabad were taken up simultaneously in spite of a very limited staff—page 17 of the Report.

The Special Engineer brings to the notice of Government that the staff of the department had as before performed their duties with zeal and enthusiasm during the year under report and deserve appreciation of their work,—page 18.

A copy of the Administration Report for 1347 F., submitted by the Special Engineer is forwarded for the perusal of the Hon'ble Members of the Water Board.

The Administration Report for the previous year, 1346 F., was considered by the Board and Resolution No. 307, was recorded after circulation.

Submitted for information of the Board.

NOTE BY THE DIRECTOR-GENERAL, REVENUE.

(*Remarks*).

The Special Engineer and his staff are to be congratulated on a year's work in which the progress and the magnitude of the work undertaken have been remarkable.

(Sd.) W. V. GRIGSON,

27-7-48 F.

S. O.

Order.

RESOLUTION No. 328.—RESOLVED THAT as recommended by the Director-General, Revenue, the appreciation of Government be communicated to the Special Engineer, and that the Administration Report be recorded.

(Sd.) W. V. GRIGSON,

for DIRECTOR-GENERAL AND SECRETARY,

Revenue Department.

SN. 13.

FN. 16/1348 F.

W. B. Br.

(Idl) M. P. R.

APPROVED.

(Sd.) AQEEL JUNG,

26-12-48 F.,

for HON'BLE THE PRESIDENT,

State Executive Council.

Abstract of the Administration Report of the District Water Works Department for the year 1347 Fashl.

1. Date of inception of the department—1338 F.
2. *Head of the department*—Mr. Samiullah Shah as Special Engineer, District Water Works and Superintending Engineer, Well Sinking Department, in 1347 F.
3. *Projects sanctioned during the year.*

	Rs.
1. Bheema Scheme for Gulbarga ..	8,65,000
2. Nizamabad Water Supply Scheme ..	6,30,000
3. Do Drainage Scheme ..	1,40,500
4. Tuljapur Water Supply Scheme ..	2,32,000
5. Do Drainage Scheme ..	60,000
	<hr/>
Total amount sanctioned ..	19,27,500
	<hr/>

Further a scheme for electrification of Tuljapur costing Rs. 37,000 was also sanctioned.

4. *Investigation of Projects.*

The following schemes were investigated and their detailed estimates framed:—

1. Nizamabad Water Supply Scheme which was sanctioned.
2. Seram Drainage Scheme.
3. Preliminary scheme of Chincholi Water Supply.
4. Preliminary scheme of Karimnagar Water Supply.
5. Mahbubnagar Water Supply Scheme.
6. Khammamet Water Supply Scheme.
5. *Works completed and maintained in good running order.*
 1. Jalna Water Supply and Drainage Schemes.
 2. Aurangabad do do
 3. Latur do do
 4. Raichur do do
 5. Nander do do
 6. Manvi Water Supply Scheme.
 7. Seram Water Supply Scheme.

6. *Works in Progress.**Sanctioned
Amount.**Rs.*

1. Warangal Water Supply Scheme ..	13,00,000
2. Do Drainage Scheme ..	3,90,000
3. Matwada Town Improvement Scheme	1,52,000
4. Remodelling Scheme of Gulbarga Water Works	3,66,000
5. Gulbarga Drainage Scheme ..	2,35,000
6. Osmanabad Water Supply Scheme.	1,00,000

Warangal Water Supply and Drainage Schemes and Osmanabad Water Supply Scheme are expected to be completed before the summer of 1348 F.

7. *Expenditure.*

During the year the total expenditure on works was Rs. 11,08,019-7-2 $\frac{1}{2}$ % and that on establishment Rs. 1,06,954-8-6 and the combined expenditure on works and establishment was Rs. 12,14,973-15-8 $\frac{1}{2}$ %. The total expenditure on construction of Water Supply and Drainage schemes from the inception of this department to the end of 1347 F. was Rs. 58,61,147-11-0 $\frac{1}{2}$ %.

(Sd.) SAMIULLAH SHAH,

10-6-48 F.

SPECIAL ENGINEER,

District Water Works.

*Administration Report of the District Water Works
Department for the year 1347 Fasli.*

1. *Establishment.*

Mr. Samiullah Shah took over charge of the duties of the Special Engineer, District Water Works, Superintending Engineer, Local Funds Department and Superintending Engineer, Well Sinking Department on 30th Azur 1347 F. (afternoon) from Mr. Mohamed Ahmad Mirza, Chief Engineer and Secretary to Government, P.W.D., who was looking after the above duties also till then. Later the charge of Superintending Engineer, Local Funds Department was handed over to Mr. C. C. Paul on 19th Dai 1347 F., in pursuance of Government orders. Mr. Samiullah Shah continued as Special Engineer, District Water Works and Superintending Engineer, Well Sinking Department throughout the year. The movements of the Special Engineer for controlling and guiding the activities of the above departments during the year are shown in Appendix No. I. The sanctioned staff and that maintained in the office of the Special Engineer are shown in Appendix No. II.

The Water Board in its resolution No. 280, dated 2-5-1347 F., RESOLVED that a special Survey Party should be employed for two years in order to expedite the investigation and preparation of the detailed estimates for the water supply and drainage schemes of ten major towns. A sum of Rs. 28,000 annually was sanctioned for this and a Special Survey Party was formed on 1-7-1347 F. The sanctioned staff of the Special Survey Party and that maintained during the year are shown in Appendix No. II-a.—page 24.

2. *Expenditure.*

The total expenditure on establishment of this office inclusive of Special Survey Party was Rs. 85,119-9-10. The total outlay on Works was Rs. 11,08,019-7-2½ and to this the Establishment charges bear a proportion of 7.68 per cent. The permissible establishment charges in the Public Works Department are 22½ per cent.

The total expenditure on the direction and control of the activities of the District Water Works Department

amounted to Rs. 1,06,254-8-6 and this represents the cost of establishment maintained during the year in the offices of the Special Engineer, District Water Works, the Chief Engineer, P.W.D., the Examiner of Accounts, P.W.D. and the Water Board Branch of the Revenue Secretariat. The details of expenditure under the establishment head of the above offices and the respective percentages to the total outlay on works are tabulated below:—

Name of Office	Expenditure on establishment during 1347 F.	Percentage of expenditure on establishment to the outlay on works of Rs. 11,08,019-7-2 $\frac{4}{8}$	Permissible percentage	Remarks
1. Office of the Special Engineer, D. W. W. ..	85,119 9 10	7.68	22 $\frac{1}{2}$	This is included in the permissible percentage of C.E.'s Office.
2. Office of the Chief Engineer, P. W. D. ..	6,508 12 0	0.58	1	
3. Office of the Examiner of Accounts, P. W. D.	10,723 0 0	0.89	1	
4. Water Board Branch of Revenue Secretariat.	4,608 2 8	0.41	..	
Total ..	1,06,954 8 6	9.56	24 $\frac{1}{2}$	

The total expenditure on construction of water supply and drainage schemes from the inception of this department to the end of 1347 F., is Rs. 58,61,147-11-0 $\frac{4}{8}$

Appendix No. III, shows the details of expenditure on the establishment of the above offices. Appendix No. IV, shows the details of expenditure on works. Appendix No. V, shows the combined expenditure on establishment and works incurred month by month. Appendix No. VI, shows the total expenditure on establishment and work incurred by the department from its inception to the end of 1347 F. The same has also been represented by a graph which gives at a glance an idea of the total ex-

penditure and percentages of expenditure on establishment to those of works,—page 43.

The total amount of non-recurring grant for the purchase of furniture, drawing and surveying instruments and office library, etc., was Rs. 30,000, out of which a sum of Rs. 25,547-2-3 $\frac{4}{5}$ was spent by the end of 1347 F., leaving a balance of Rs. 4,352-13-8 $\frac{2}{5}$. Appendix No. VII, shows these details,—page 33.

3. *Projects sanctioned during the year.*

During the year the following projects were sanctioned by the Water Board:—

<i>Name of Work.</i>	<i>Amount of sanctioned Estimate.</i>
	Rs.
1. Bheema Scheme for Gulbarga..	8,65,000
2. Nizamabad Water Supply Scheme ..	6,30,000
3. Nizamabad Drainage Scheme ..	1,40,500
4. Tuljapur Water Supply Scheme.	2,32,000
5. Do Drainage Scheme ..	60,000
Total ..	<u>19,27,500</u>

Further a scheme for the electrification of Tuljapur costing Rs. 37,000, was also sanctioned.

4. *Investigation of Projects.*

Nizamabad Water Supply and Seram Drainage schemes were investigated and framed and after the approval of the Chief Engineer, P.W.D. were forwarded to the Revenue Secretary for sanction of the Water Board. The preliminary reports of the water supply schemes for Chincholi and Karimnagar were prepared and submitted to the Revenue Secretary. The revision of Mominabad and Bodhan water supply schemes was taken up.

The Special Survey Party has completed the investigation and detailed surveys of the water supply and drainage schemes for Mahbubnagar and Khammam towns and started those of Yadgir. The proposals and detailed estimates have been framed and were under the scrutiny of this office.

Appendix No. VIII, shows the details of projects investigated, framed and submitted for sanction from the inception of this department to the end of 1347 F,—page 34.

5. *Works completed.*

The completed water works and drainage works of the following five major towns were controlled and maintained in good running order by this department:—

1. Jalna.
2. Aurangabad.
3. Latur.
4. Raichur.
5. Nander.

The expenditure on the above completed works against the amounts of sanctioned estimates are shown in Appendix No. 4.

Apart from the above works the department has constructed protected water supply schemes in small towns of Manvi and Seram. Seram water supply scheme was completed early in 1347 F. and was put into operation in the same year. These works were also maintained in good running order. The expenditure on Seram water supply scheme is also shown in Appendix No. 4,—page 28.

6. *Works in progress.*

The following schemes have been in progress during the year:—

1. Warangal Water Supply Scheme.
2. Do Drainage Scheme.
3. Matwada Town Improvement Scheme.
4. Remodelling Scheme of Gulbarga Water Works.
5. Gulbarga Drainage Scheme.
6. Osmanabad Water Supply Scheme.

The detailed progress of the above schemes is briefly described below:—

1. *Warangal Water Supply Scheme.*

This work was started in Aban 1345 F. During the year under report only repairs to the tank bund and closing of leakages, etc., were carried out. No work was done on the feeder channel as the handing over of this channel to this department by the Public Works Depart-

ment was under consideration. The whole of conduit which is about 7 miles was practically completed except a few finishing touches here and there and the line was under test. Regarding the filters, the mechanical parts were received, the civil works were under progress, the construction of mixing chamber was also under progress. Staff quarters were almost completed. Five miles of trunk main out of seven miles were completed. The masonry Service Reservoir at Nakalgutta was almost complete. The work of R. C. C. Service Reservoir at Matwada was given to the Hindustan Construction Co., and they have started the work. The whole of the distribution system, which is about 29 miles was almost completed. The Superintendent's office was completed in 1346 F., and at present the office of the Assistant Engineer in charge of these works is functioning in this building. In short the major portion of the works was completed and the whole scheme is expected to be completed before the summer of 1348 F.

The expenditure on the above works during the year under report was Rs. 5,38,389-5-6 and the total expenditure to the end of the year from the commencement of the works was Rs. 9,47,756-12-2½ against the sanctioned amount of Rs. 13 lacs for the whole scheme. The detailed expenditure on various works against the sanctioned amounts allotted to them is shown in Appendix No. IX.

2. *Warangal Drainage Scheme.*

The total length of the proposed open type of drains in Hanamkonda is about 20 miles and those in Matwada is about 26 miles. The work in Hanamkonda locality was completed and a major portion of the work in Matwada was also completed. Along with the construction of drains the existing roads were widened and improved by removing all the unlawful encroachments. The work is in full swing.

The sanctioned amount for the drainage scheme is Rs. 3,90,000. The expenditure during the year was Rs. 1,41,071-9-7¼ and the total expenditure to the end of the year was Rs. 2,02,283-9-8½.

3. *Matwada Town Improvement Scheme.*

This scheme comprises of two parts. The first is the construction of a new dust-proof road of 4150 ft. long

across the slum area of Matwada connecting the Narsampet road to Warangal station road. A part of this road will be 40 ft. wide and the rest 60 ft. wide. The sanctioned amount for this scheme is Rs. 1,52,000 including compensation of land and construction of the road. The second part comprises of the acquisition of land 50 ft. wide for new shops on either side of the 60 ft. proposed road. The total cost of acquisition as worked out in details comes to Rs. 1,15,000.

The first part of this scheme was taken up during the year and the second part will be taken up on seeing the results of part first. The compensation of lands has been paid and all the houses have been acquired and the dismantling work was completed. Plots for auction were marked out. The construction of the road will be taken up when funds are available from the proceeds of the auction. The expenditure on these works was Rs. 1,43,623-10-7.

4. *Remodelling Scheme of Gulbarga Water Works.*

A protected water supply scheme for Gulbarga has been in existence for the last 20 years. The source of the supply is the Bhosga tank. Water is drawn from this tank by gravity and after filtration through slow sand filters it is distributed in the town.

Due to the expansion of the town and a few technical defects, the existing system has been found inadequate and is now proposed to be remodelled.

The work was commenced in Ardibehisht 1347 F., and good progress was maintained during the year. The distribution system was almost completed. The Superintendent's Office building and the Staff quarters were nearing completion. Adequate arrangements for the water supply to Aiwan Shahi and the Subedari were made.

The sanctioned amount for the scheme is Rs. 3,66,000. The expenditure during the year was Rs. 1,85,343-15-9³/₄. The details are shown in Appendix No. X, page 40

5. *The Bheema Scheme.*

To guard against water famine in years of continued drought when the Bhosga tank would not be in a position to cope up with the demand and to create a source of water

supply that will supplement the Bhosga system at all times the Bheema scheme costing Rs. 8,65,000 was sanctioned.

The scheme aims at tapping the subsoil water of the Bheema river by sinking an infiltration gallery in its bed and pumping water with a pumping head of 563 ft. through a C. I. Rising main of about 16 miles.

During the year investigations were started for the selection of a suitable site for gallery. Two suitable sites, one near Chinnur ($19\frac{1}{2}$ miles from Gulbarga) and the other at Hagargudgi (17 miles from Gulbarga) were selected for carrying out the boring operations at the above sites in order to draw geological sections of the site to decide definitely about the location and design of the gallery and the Head Works. Borings at the above sites were taken in the month of Thir 1347 F. But on the representation of the Special Engineer to the Water Board further works of this scheme were withheld, so as to evolve a cheaper scheme for the supplementary supply to Gulbarga.

The expenditure incurred on the above works was Rs. 1,675-4-4½ which is shown in Appendix No. XI.

6. *Experiments in Bhosga Surplus Nala.*

As mentioned above, in order to evolve a cheaper scheme than Bheema and much nearer to Gulbarga, preliminary investigations for securing the required quantity of water were made and it was found that there was a possibility of tapping abundant quantity of subsoil water between the villages of Kapnur and Malagatti in the valley of the Bhosga surplus nala. Excavation of a trench was started in the bed of the nala near Malagatti village for taking the recuperation tests but on account of the unusual early advent of the rains the experiments had to be stopped on 22nd Thir. The expenditure incurred on these experiments was Rs. 276-8-6 which will be met from the anticipated savings of Remodelling scheme. On the representation of the Special Engineer, the Water Board decided to postpone the Bheema scheme for one year so that a cheaper scheme may be evolved and the above experiments may be carried out during the summer of 1348 F.

7. *Gulbarga Drainage Scheme.*

The total length of the proposed open type of drains is about 48 miles. The construction of the drains was also commenced along with the Remodelling scheme of Gulbarga Water Works in Khurda 1347 F. The scheme had to be resurveyed and revised plans and detailed estimates had to be prepared as the original proposals were made about five years ago and since then the town had developed in several localities. The construction of drains in Station Bazaar was completed and that of New Gunj was started. Along with the construction of drains the formation of the existing roads were also improved. The works were in rapid progress during the year.

The sanctioned amount for the Drainage scheme is Rs. 2,35,000 and the expenditure incurred during the year Rs. 9,593-6-6.

8. *Osmanabad Water Supply Scheme.*

This is the third scheme of its type constructed for minor towns by this department, the first two being for Manvi and Seram. The amount of sanctioned estimate for this scheme is Rs. 1,00,000. This scheme is financed 50 per cent. from the Silver Jubilee funds collected by the public of Osmanabad and 50 per cent. from the subvention of Government.

The construction of the works of this scheme was started in Ardibehisht 1347 F. The work of the infiltration gallery and of the pump well was greatly hampered on account of the early monsoons. However they were almost completed by the end of the year and fixing of pumps and engines was also commenced. The Service Reservoir which is a R. C. C. elevated tank was nearing completion. The site selected for the elevated tank is by the side of the Club and it is proposed to lay out a garden all round, which when completed would serve the purpose of a public park and a beauty spot in the town. The distribution system was in rapid progress and nearing completion. The works were in full swing and are expected to be completed earlier than the summer of 1348 F.

The expenditure incurred during the year was Rs. 25,224-2-2. The details are shown in Appendix No. XII, page 42.

9. *Maintenance of Water Works.*

The statements of expenditure on this head during the year were not received in time after the verification of the respective District Treasury Offices and consequently they are now shown in the appendices 13-21.

During the year under report the maintenance of the water works of the following seven towns were under the technical control of the Special Engineer:—

1. Jalna.
2. Aurangabad.
3. Latur.
4. Raichur.
5. Gulbarga.
6. Nander.
7. Seram.

Seram water works were completed by the end of Aban 1345 F., and brought into commission in 1347 Fasli. All the above water works were maintained satisfactorily and the expenditure on maintenance kept at a minimum.

The progress of house connections during the year in the above towns has been shown in Appendix No. 13. The total and daily consumption of water during the year together with the consumption of Alum and Chlorine for sterilization of water with their respective average doses have been shown in Appendix No. 14 Appendices No. 15 to 21 show the cost of maintenance of the above water works and revenue realised from the commencement to the end of 1347 Fasli.

10. *Concluding Remarks.*

This department was established in the year 1338 Fasli. The year under report, therefore, is the 10th year of its life and within these ten years, five major towns, viz., Jalna, Aurangabad, Latur, Raichur and Nander have been provided with well-organised water supply and drainage schemes and two minor towns, viz., Manvi and Seram with protected water supply schemes. Next year it is expected that there will be an addition of one major town, Warangal and one minor town, Osmanabad, in the list of completed works.

The completed works have been efficiently maintained and the inhabitants of these towns are supplied with wholesome water. The demand for protected water supply is growing day by day.

The year 1347 F. has been unique in the history of District Water Works Department both on account of its widely spread activities and considerable expenditure on works. This is the first time in the history of District Water Works Department that the water supply and drainage schemes of three district towns, viz., Warangal Gulbarga and Osmanabad, were taken up simultaneously in spite of a very limited number of staff. The Warangal Water Supply and Drainage schemes and Osmanabad Water Supply scheme are expected to be completed before the summer of 1348 F. The works of Remodelling Gulbarga Water Works and Drainage schemes are in good progress. The expenditure during the year under report was almost double of that in 1346 F. and the percentage of expenditure on establishment to that on works was much less, i.e., only 9.56 per cent.

Acknowledgment of Services.

The staff of the District Water Works Department have as before performed their duties with zeal and enthusiasm during the year under report and deserve appreciation of their work.

(Sd.) SAMIULLAH SHAH,

10-6-48 F.

SPECIAL ENGINEER,
District Water Works.

[Statement.]

APPENDIX No. 1.

Statement showing the movements of the Special Engineer, District Water Works Department during the year 1347 F.

Serial No.	Name of month			No. of days in month	Working days in the month	No. of days spent on tour during the month
1	Azur	..	..	30	18	16
2	Dai	..	..	29	19	14
3	Bahman	..	..	30	19	7
4	Isfandar	..	..	30	22	16
5	Farwardi	..	..	31	19	7
6	Ardibehisht	..	..	31	16	5
7	Khurdad	..	..	31	26	14
8	Thir	..	..	31	22	15
9	Amardad	..	..	31	26	15
10	Shehrewar	..	..	31	26	14
11	Mehir	..	..	30	21	11
12	Aban	..	..	30	18	7
	Total	..	..	365	252	141

Column No. 3, bears to column No. 1, 88.6 %
Do do do 2, 56.0%

APPENDIX

Statement of the strength of the Office of the Special Engineer,

Serial No.	Names	Designation	No. in each grade	STRENGTH	
				Sanc-tioned	Main-tained
1	Syed Samiulla Shah, Esqr. ..	Special Engineer	1	1	1
2	Mr. Mirza Mehdi Ali ..	Assistant ..	1	1	1
3	„ R. G. Borgoankar ..	Sub-Engineer	1	3	1
4	„ Sri Hari Ram ..	Supervisor	1	3	3
5	„ Ramasastri ..	„	2		
6	„ Sri Hari ..	„	3		
7	„ G.V.L.K. Nagabhushana Rao	Overseer	1	5	3
8	„ S. A. Saraf ..	„	2		
9	„ M. A. Manan ..	„	3		
10	„ Vacant ..	„	„		
11	„ Vacant ..	„	„		
12	„ Govindaswamy ..	Sub-Overse	1	10	
13	„ Balaji ..	„	2		
14	„ T. B. Sundaram ..	„	3		
15	„ K. S. N. Moorthy ..	„	4		
16	„ Mohamad Hussain ..	„	5		
17	„ L. A. Saraf ..	„	6		
18	„ Olaganatham ..	„	7		
19	„ Vacant ..	„	„		
20	„ Babiah ..	Tracer	„		
21	„ Laxminarayana ..	„	„		
22	„ Guruswamy ..	Copyist	„		
23	„ Padma Rao ..	„	„		
24	„ M. A. Rasheed ..	Supdt.	1		1
25	„ Afzal Mirza ..	Accountant	1	1	1
26	„ M. R. Sayeed ..	Clerk 80-125	1	1	1
27	„ Augustine ..	„ 80	1	2	2
28	„ Pathy Ragu ..	„ „	2		
29	„ Rama Rao ..	„ 60-1-70	1		
30	„ Suryakoti ..	„ „	2	5	5
31	„ Mohamad Ahmad ..	„ „	3		
32	„ Dilawar Ali ..	„ „	4		
33	„ Sagir Mirza ..	„ „	5	5	5
34	„ Bowen ..	„ 85-70	1		
35	„ Venkateshwarulu ..	„ „	2		
36	„ Seetharamiah ..	„ „	3		
37	„ Shivilal ..	„ „	4		
38	„ Mehdi Husain ..	„ „	5		
39	„ Hyder Ali ..	„ „	6		
40	„ Abdul Hasab ..	„ „	7		

No. 2.

District Water Works during the year 1347 F.

Appointing authority	Date of joining duties	Remarks
Resolution No. 259 of W.B.D. 25-12-46 F.	1-2-1347 F.	
C.E.'s. O.O. No. 258 dated 10-8-42 F.	22-9-1342 F.	
Rev. Sect. No. 1486 „ 1-5-46 F.	22-5-1347 F.	
„ 337/42 W.B. 15-5-30 F.	15-9-1339 F.	Took charge of the duties of Sub-Engineer, Special Survey Party from forenoon of 1-7-1347 F.
„ 406/940 „ 11-7-32 F.	15-3-1341 F.	
„ 126/3144 „ 7-3-45 F.	7-3-45 F.	
„ 129/42 „ 25-1-32 F.	15-3-41 F.	
„ 505/42 „ 6-6-33 F.	15-8-42 F.	
„ 208/3144 „ 9-4-47 F.	1-3-47 F.	
S.E.'s O.O. No. 117 dated 27-9-1347 F.	6-9-1347 F.	
S.E.'s O.O. No. 29 15-8-39 F.	14-9-1339 F.	
„ 26 17-7-41 F.	20-7-1341 F.	
„ 24 11-7-42 F.	1-8-1342 F.	
„ 41 2-12-45 F.	1-1-1346 F.	
„ „ „	„	
„ 5 14-1-45 F.	1-1-45 F.	
„ „ „	„	
„ „ „	„	
„ „ „	„	
Rev. Sect. No. 284/42 W.B.D/-8-5-47 F.	9-5-47 F.	
E.O.A.'s. No. 25/E dated 10-5-46 F.	16-5-46 F.	
Rev. Sect. No. 206/4243 W.B.D/-3-6-47	16-3-47 F.	
S.E.'s. O.O. 43 dated 23-10-43 F.	1-11-43 F.	
„ 18 „ 8-3-45 F.	1-2-45 F.	
„ 22 „ 12-7-42 F.	10-10-42 F.	
„ 1701 „ 22-11-41 F.	15-11-41 F.	Resignation accepted <i>vide</i> S.E.'s O.O. No. 60 d/-30-6-47 F. from 1-7-47 F.
„ 43 „ 23-10-43 F.	1-11-43 F.	
„ 60 „ 30-6-47 F.	1-7-47 F.	
„ 82 „ 3-8-47 F.	1-8-47 F.	
„ 13 „ 17-1-45 F.	1-2-45 F.	
„ 36 „ 31-8-41 F.	1-7-41 F.	
„ 3 „ 4-1-45 F.	1-1-45 F.	
„ 19 „ 5-9-46 F.	1-9-46 F.	
„ 8 „ 26-2-46 F.	1-2-46 F.	Left service from 18-5-47 F. <i>vide</i> S.E.'s O.O d/-23-5-47 F.
„ 4 „ 9-3-47 F.	6-3-47 F.	
„ 3 „ 4-1-45 F.	2-1-45 F.	
		Promoted to 35-70 from 18-5-47 F. do

APPENDIX

Statement of the strength of the Office of the Special Engineer

Serial No.	Names	Designation	No. in each grade	STRENGTH	
				Sanc- tioned	Main- tained
41	Mr. Sayed Abid Hashim ..	Clerk 30-60	1	}	4
42	„ Mujtaba Hussain ..	„ „	2		
43	„ Solomon ..	„ „	3		
44	„ Mhd. Mohiuddin ..	„ „	4		
45	„ Rajaiah ..	„ Sharoff	1	}	1
46	„ Mohamad Ali ..	Dafaidar	1		
47	Peons ..	..	..	10	10
48	Lascars ..	..	..	30	30

No. 2.—(concd.)

District Water Works during the year 1347 F.

Appointing authority	Date of joining duties	Remarks
S.E.'s. O.O. 3 dated 4-1-45 F.	2-1-45 F.	
" 8 " 26-2-46 F.	1-2-46 F.	
" 19 " 5-9-46 F.	1-9-46 F.	
" 35 " 23-5-47 F.	18-5-47 F.	
" 27 " 1-11-46 F.	2-11-46 F.	
" 1 " 5-8-1929 A.D.	7-8-38 F.	

APPENDIX No. 2-A

Statement of the Strength of the Special Survey Party during the year ending with 1ban 1347 F.

Srl. No.	Names	Designation	STRENGTH		Appointing Authority	Date of joining duties
			Sanc-tioned	Main-tained		
1	Mr. A. Sihari Ram ..	Sub-Engineer	1	1	Rev. Sect. L. No. 740/3347	
2	„ Abdullah Khan ..	Supervisor	2	1	W.B. d/-9-9-47 F.	1-7-4 F.
3	<i>Vacant.</i>	..	..	..	856/3347 W. B.	
4	„ Aftab Ali ..	Overseer	3	2	d/-25-10-47 F.	1-7-47 F.
5	„ Suryanarayana Murty	„	..	..	740/3347 W.B.	1-7-47 F.
6	<i>Vacant</i> ..	..	..	..	d/-9-9-47 F.	1-7-47 F.
7	„ Sirajullah ..	Sub-Overseer	..	..	„
8	„ Mohamad Haneef ..	„	..	..	E. O.O. No. 62	
9	„ Abdul Hakeem Quayani. ..	„	5	3	d/-30-6-47 F.	3-7-47 F.
10	<i>Vacant</i> ..	„	..	..	59,	
11	<i>Vacant</i> ..	„	..	..	d/-30-6-47 F.	15-7-47 F.
12	<i>Vacant</i> ..	„	..	..	107,	
13	Lascars ..	..	20	12	d/-25-8-47 F.	28-8-47 F.

Statement of expenditure on establishment of District Water Works Department

Pay of Executive, clerical and menial staff	Fixed allowance	Acting, motor and T.A. charges	OFFICE OF THE SPECIAL ENGINEER		
			Contingencies	Special charges	Contributions
Rs. a. p. 3,083 12 3	Rs. a. p. 255 0 0	Rs. a. p. 425 4 0	Rs. a. p. 101 4 10	..	Rs. a. p. 154 14
4,282 2 4	305 0 0	994 0 5	43 3 1	..	428 8
1,755 8 0	280 0 0	..	110 11 6	..	131 4
4,303 1 7	280 0 0	86 4 8	528 12 7	..	412 14
7,235 3 8	297 0 0	705 0 1	340 0 6	..	843 12
1,227 8 11	185 0 0	622 2 1	344 12 10	..	..
3,836 12 9	80 0 0	695 5 2	460 5 9	..	414 7
4,932 18 6	240 0 0	784 1 5	846 0 2	..	414 7
5,329 1 1	305 0 0	433 10 8	327 0 0	..	420 7
4,974 5 0	250 0 0	983 3 11	3,017 12 9	..	420 7
2,842 18 0	82 9 3	255 7 10	330 15 0	..	420 7
9,492 15 5	435 0 0	1,410 8 6	2,248 10 10	..	707 9
53,246 1 6	2,994 9 3	7,995 0 9	8,010 2	..	4,769 3

Note :—Charges on Special Survey Part

No. 3.

for the year ending with 1347 F.

DISTRICT WATER WORKS		OFFICE OF THE CHIEF ENGINEER, P.W.D.		Office of the Examiner of Accounts	Water Board Branch of the Revenue Secretariat and charge allowance	Grand Total
Rates and rent	Total	Salaries and charge allowance	Contribu- tion			
Rs. a. p. 175 0 0	Rs. a. p. 4,195 3 1	Rs. a. p. ..	Rs. a. p. ..	Rs. a. p. 893 9	Rs. a. p. 504 0 0	Rs. a. p. 5,592 12 5
175 0 0	6,177 13 10	926 0 0	175 0 0	893 9 4	352 0 0	8,524 7 2
..	2,277 7 6	400 0 0	87 8 0	893 9 4	..	3,658 8 10
175 0 0	5,786 0 10	..	..	893 9 4	402 0 0	7,081 10 2
350 0 0	9,771 0 3	576 0 0	87 8 0	893 9 4	592 0 0	11,920 1 7
175 0 0	1,864 14 2	1,013 0 0	175 0 0	893 9 4	..	3,946 7 6
175 0 0	5,661 15 3	100 0 0	..	893 9 4	219 3 9	6,874 12 4
175 0 0	7,392 6 8	500 0 0	93 12 0	893 9 4	352 0 0	9,231 12 0
175 0 0	6,990 3 4	500 0 0	93 12 0	893 9 4	332 0 0	8,809 8 8
175 0 0	9,820 13 3	500 0 0	93 12 0	893 9 4	312 0 0	11,620 2 7
175 0 0	4,107 4 8	500 0 0	93 12 0	893 9 4	696 0 0	6,290 10 0
350 0 0	14,644 12 7	500 0 0	93 12 0	893 9 4	841 14 11	16,974 0 10
2,275 0 0	73,689 15 5 6,429 10 5	5,515 0 0	993 12 0	10,723 0 0	4,603 2 8	1,00,524 14 1
Total	85,119 9 10					

District Water Works, Rs. 6,429-10-5. Grand total = Rs. 1,06,954-8-6

APPENDIX No. 4.

Statement of expenditure on works of the District Water Works Department to the end of 1947 F.

Serial No.	Name of work	Amount of sanctioned estimate		Expenditure to the end of Aban 1946 F.		Expenditure during 1947 F.		Grand total to the end of 1947 F.	
		Rs.	a. p.	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.
1	Investigation, a Preliminary Survey	..	..	6,686	10 4	-3,949	2 5	2,687	7 11
2	Construction of Jajna Water Supply	8,93,000	0 0	8,91,810	9 9 ⁵ / ₆	280	1 10	8,92,090	11 7 ⁵ / ₆
3	Drainage	1,92,000	0 0	1,91,126	14 3	..	..	1,91,126	14 3
4	Aurangabad Water Supply	3,55,000	0 0	3,51,947	7 10 ¹ / ₆	980	1 10	3,52,927	9 8 ¹ / ₆
5	Drainage	1,96,227	10 3	2,06,104	0 6 ³ / ₆	..	..	2,06,104	0 6 ³ / ₆
6	Latur Water Supply	7,36,000	0 0	7,34,918	14 5 ³ / ₆	351	12 9	7,35,270	11 2 ³ / ₆
7	Drainage	1,45,000	0 0	1,44,031	8 2 ¹ / ₆	..	..	1,44,031	9 2 ¹ / ₆
8	Raichur Water Supply	11,65,288	18 4	11,48,428	8 2 ² / ₆	8,824	12 0	11,57,253	0 0 ⁴ / ₆
9	Drainage	1,63,796	13 10 ² / ₆	1,63,748	0 0 ⁴ / ₆	..	..	1,63,748	0 0 ⁴ / ₆
10	Nander Water Supply	6,27,500	0 0	5,01,402	12 2 ² / ₆	13,294	7 10 ³ / ₆	5,14,697	4 0 ⁵ / ₆
11	Drainage	95,000	0 0	94,986	12 7	13	8 7 ² / ₆	94,973	3 11 ¹ / ₆
12	Warangal Water Supply	13,00,000	0 0	4,09,367	5 9 ⁵ / ₆	5,38,389	6 5	9,47,756	12 2 ⁵ / ₆
13	Drainage	3,90,000	0 0	61,212	0 0 ⁴ / ₆	1,41,071	9 7 ⁴ / ₆	2,02,283	9 8 ² / ₆
14	Remodelling Gulbarga Water Supply	3,66,000	0 0	..	..	1,85,343	15 9 ³ / ₆	1,85,343	15 9 ³ / ₆
15	Construction	2,35,000	0 0	..	..	9,598	6 6	9,598	6 6
16	Drainage	8,65,000	0 0	..	..	1,675	4 4 ⁴ / ₆	1,675	4 4 ⁴ / ₆
17	Bhima scheme ..	1,00,000	0 0	..	..	25,224	12 2	25,224	12 2
18	Osmanabad Water Supply	17,000	0 0	15,219	9 7	..	..	15,219	9 7
19	Changing Media of Filters at Gulbarga	37,000	0 0	26,469	8 7	-7,329	15 7 ² / ₆	19,139	8 11 ⁴ / ₆
20	Construction of Seram Water Supply	..	..	..	..	..	..	..	..
	Total	..	..	49,47,410	10 6	9,13,787	0 6 ⁴ / ₆	58,61,147	11 0 ⁴ / ₆

<i>Detail of expenditure on works during 1847 F.</i>				9,13,787	0	6 ⁴ / ₆	Total B. F.	..	..	11,06,965	8	0 ⁴ / ₆
1	Expenditure on works	..	..	..	..	..	Expenditure L.F. & W.S. Dept.	..	..	..	..	..
2	„ maintenance	..	..	109	12	1	Amount under Misc. advances	..	..	1,052	5	8
	Jalna maintenance	—643	14	2			Corrected by E.O.A.	..	..	1	9	6
	Seram ..	753	10	3			Grand total	..	..	11,08,019	7	2 ⁴ / ₆
		109	12	1								
3	Expenditure on miscellaneous works	..	..	1,56,108	7	0						
	Matwada improvements	1,43,623	10	7								
	Drop water shutters of river	12,484	12	5								
	Manjira											
	Suspense account											
	Miscellaneous Advances	1,56,108	7	0								
				—309	13	2 ⁴ / ₆						
				37,320	1	7 ⁴ / ₆						
				11,06,965	8	0 ⁴ / ₆						

APPENDIX No. 5.

Statement of expenditure on Establishment and Works of District Water Works Department during the year 1347 F.

Serial No.	Name of month	EXPENDITURE ON		Total Expenditure
		Establishment	Works	
		Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Azur	5,592 12 5	24,192 11 11 ² / ₆	29,785 8 4 ⁴ / ₆
2	Dai	8,524 7 2	2,214 9 0 ⁵ / ₆	6,309 14 1 ¹ / ₆
3	Bahman ..	3,658 8 10	20,159 1 5 ⁴ / ₆	23,817 10 3 ⁴ / ₆
4	Isfandar ..	7,081 10 2	85,170 11 4 ¹ / ₆	92,252 5 6 ¹ / ₆
5	Farwardi ..	11,920 1 7	1,39,904 13 1 ¹ / ₆	1,51,824 14 8 ¹ / ₆
6	Ardibehisht ..	3,946 7 6	23,298 13 5 ⁴ / ₆	27,245 4 11 ⁴ / ₆
7	Khurdad ..	6,874 12 4	98,595 0 9 ³ / ₆	1,05,469 13 1 ³ / ₆
8	Thir	9,231 12 0	1,37,283 3 3	1,46,514 15 3
9	Amardad ..	8,809 8 8	55,239 0 3 ³ / ₆	64,048 8 11 ³ / ₆
10	Shehrewar ..	11,620 2 7	1,70,346 5 3 ³ / ₆	1,81,966 7 10 ³ / ₆
11	Mehir	6,290 10 0	31,934 12 8	38,225 6 8
12	Aban	16,368 11 0	1,42,311 12 5	1,58,680 7 5
	Total ..	99,919 8 3	9,26,221 12 11 ⁴ / ₆	10,26,614 5 2 ⁴ / ₆

Works and Establishment 10,26,141 5 2⁴/₆ Total O.S. Rs. 12,14,281 4 8⁴/₆

Maintenance	109 12 1	Amount corrected by E.O.A. under office contingencies & Misc. Advance without intimation to this office	692 11 0
Matwada improvement ..	1,43,623 10 7		
Suspense account	— 309 13 2 ⁴ / ₆		
Miscellaneous advances ..	37,320 1 7 ⁴ / ₆		

Well Sinking and Local Fund, etc.	1,052 5 8	Grand total	12,14,973 15 8 ⁴ / ₆
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Special Survey Party, etc. 6,429 10 5

	12,14,867 0 4 ⁴ / ₆
Revenue realised	— 85 11 8

Grand Total .. 12,14,281 4 8⁴/₆

Rs. 4,56,625-14- $\frac{2}{3}$

Expenditure on works
EXPEN

SANCTIONED GRA

Rs. 60,515-13-6

EXPEN

Rs. 70,011

ent from 1338 F. to the end of 1347 F.

Details of Drainage Project					Total of D Pro
11					12
No.		Rs.	a.	p.	Rs.
4/8	Jalna ..	19,615	2	3	19,615
	Jalna ..	1,05,670	14	7	1,82,008
2/8	Aurangabad ..	76,337	8	0	
	Jalna ..	61,466	13	0	1,89,475
	Aurangabad ..	1,29,953	0	5	
5/8	Raichur ..	531	5	0	1,29,514
	Latur ..	1,524	1	5	
	Jalna ..	82,74	2	4	1,63,970
	Aurangabad ..	969	7	6	
	Raichur ..	68,475	7	10 1/2	85,111
1/12	Latur ..	58,735	11	6	
	Jalna ..	1,099	14	1	1,63,970
	Aurangabad ..	4,782	15	7 3/8	
	Raichur ..	78,814	10	9 7/12	85,111
	Latur ..	79,057	1	9 1/8	
9/12	Warangal ..	221	10	0	91,502
	Latur ..	4,717	9	6	
22/8	Raichur ..	15,975	6	3	91,502
	Nanded ..	61,249	5	2	
	Warangal ..	3,175	15	10	91,502
	Raichur ..	—	48	13 10	
10 1/8	Nanded ..	33,737	7	5	—
	Warangal ..	57,814	6	2 1/2	

APPENDIX No. 7

Statement of Expenditure out of the non-recurring grant of Rs. 30,000 to the end of 1947 F.

Seri- al No.	Particulars	Sanctioned amount	Expenditure to the end of 1946 F.	Expenditure during 1947 F.	Total expendi- ture to the end of 1947 F.	Balance available
1	Purchase of Furniture ..	Rs. a. p. 5,988 10 8	Rs. a. p. 4,708 0 5	Rs. a. p. 389 6 2	Rs. a. p. 5,097 6 7	Rs. a. p. 891 4 1
2	Drawing and Mathematical instruments	18,000 0 0	15,365 15 11 ⁴ / ₆	2,819 1 4	17,685 1 3 ⁴ / ₆	314 14 8 ² / ₆
3	Purchase of Maps and books	1,636 11 8	918 5 2	258 9 2	1,176 14 4	459 13 4
4	" Typewriter	1,261 5 4	611 5 4	..	611 5 4	650 0 0
5	" Camp equipage	1,103 4 4	176 0 0	..	176 0 0	927 4 4
6	" Bicycles ..	310 0 0	277 15 7	..	277 15 7	82 0 5
7	" Chemicals and apparatus for water analysis ..	1,700 0 0	622 7 2	..	622 7 2	1,077 8 10
	Total	30,000 0 0	22,680 1 7 ⁴ / ₆	2,967 0 8	25,647 2 3 ⁴ / ₆	4,352 13 8 ² / ₆

APPENDIX No. 8.—(contd.)

Statement showing the names and cost of the Projects investigated from 1888 F. to end of 1847 F.—(contd.)

Seri- al No.	Fasli year	Names of schemes	Cost of schemes pre- pared by the Special Engi- neer	Cost of schemes approved by the C.E., P.W.D.	Stage of schemes in the Water Board	Remarks
			Rs.	Rs.		
26	1843 F.	Nil	..	..
27	1844 F.	Nil	..	..
	1845 F.	Patancheroo Water Supply Scheme	10,000	..	Sanctioned.	
	"	" Village Improvement Scheme	4,800	..		
28	"	Osmanabad Water Supply Scheme	1,00,000	1,00,000	Work sanctioned	Work to be started.
29	"	Remodelling of Gulbarga Water Works	4,00,000	4,04,000	"	"
30	"	" Nizamabad Water Works	5,60,000	..	To be submitted to C.E., P.W.D. for scrutiny.	
31	"	Manvi Water Supply Scheme, Part I	13,000	..	Sanctioned	Work completed.
32	"	" " Part 2	30,000	..	Awaiting sanction.	
		Total cost of Schemes for which de- tailed surveys were made and sub- mitted	11,17,800	5,04,000		

Schemes for which preliminary reports have been submitted to the Revenue Secretary	1,17,990	..	Work completed.
(1) Patan Water Supply Scheme	13,000	..	
(2) Gagazipura Water Supply No. 1 pumping Scheme	55,000	..	
(3) " " No. 2 Gravity Scheme	1,45,000	..	
(4) Bidar Water Supply	35,000	..	
(5) Nalgonda Water Supply	1,87,000	..	Work sanctioned. Submitted for Water Board for sanction since sanctioned in the month of Dai 1847 F.
(6) Revised Scheme for Parbhani Water Supply	80,000	..	
(7) Asafabad Water Supply Scheme	2,92,800	..	
(8) Mominabad Water Supply Scheme (Joint Scheme)	36,000	..	
(9) Parasnath	1,33,500	..	
(10) Bhir	1,24,300	..	Work completed.
(11) Bodhan		..	
Total cost of Schemes for which preliminary reports were submitted	12,20,090	..	
Total cost of Schemes for which surveys were made and preliminary reports submitted in 1845 F.	23,37,890	..	
Seram Water Supply Scheme	37,000	..	Work completed.
Bhima Scheme, Gulbarga Water Supply.	8,65,000	..	
Total value of Schemes prepared..	9,02,000	..	

APPENDIX No. 10.

Statement showing the Expenditure incurred on remodelling Gulbarga Water Supply Scheme to the end of Aban 1347 F.

Serial No.	Particulars	Estimated amount	Expenditure to the end of 1346 F. Aban	Expenditure during 1347 F.	Total expenditure to the end of Aban 1347 F.
		Rs.		Rs. a. p.	Rs. a. p.
1	Head works	7,000	..	8 3 6	8 3 6
2	Conduit	5,000	..	..	..
3	Filters	86,000	..	..	..
4	Service reservoir	28,000	..	..	..
5	Distribution system	1,86,000	..	1,65,114 10 10½	1,65,114 10 10½
6	Telephone	5,000	..	..	..
7	Office building and quarters	14,000	..	6,640 3 8¾	6,640 3 8¾
8	Well supply to Aiwanshahi & Subedari	7,000	..	1,356 7 8	1,356 7 8
9	Petty establishment	8,600	..	1,736 10 8	1,736 10 8
10	Tools and plant	8,600	..	9,068 1 3	9,068 1 3
11	Contingencies	10,800	..	812 6 2	812 6 2
12	Bhosga surplus stream .. ..	..	..	276 8 6	276 8 6
13	Investigation and preliminary survey .. ..	..	..	330 11 6	330 11 6
	Total	3,66,000	..	1,85,343 15 9¾	1,85,343 15 9¾

APPENDIX No. 11.

Statement showing the Expenditure incurred on Bhima Scheme to the end of Aban 1347 F.

Serial No.	Particulars	Estimated amount	Expenditure to the end of Aban 1346 F.	Expenditure during the year 1347 F.	Total expenditure to the end of 1347 F.
		Rs.		Rs. a. p.	Rs. a. p.
1	Infiltration gallery	.. 36,000	..	..	..
2	Pump tower and foot bridge	.. 63,000	..	..	..
3	100 H.P. pump and oil engines	.. 1,00,000	..	..	..
4	Rising main	.. 6,25,000	..	..	..
5	Contingencies	} 41,000	..	1,669 1 4 ⁴ / ₆	1,669 1 4 ⁴ / ₆
6	Tools and plant		..	6 3 0	6 3 0
	Total	.. 8,65,000	..	1,675 4 4 ⁴ / ₆	1,675 4 4 ⁴ / ₆

APPENDIX No. 12.

Statement showing the Expenditure incurred on Osmanabad Water Supply Scheme to the end of Aban 1847 F.

Serial No.	Particulars	Estimated amount	Expenditure to the end of Aban 1847 F.	Expenditure during the year 1847 F.	Total expenditure to the end of Aban 1847 F.
		Rs.		Rs. a. p.	Rs. a. p.
1	Infiltration gallery ..	11,000	..	10,417 4 8	10,417 4 8
2	Pump well ..	7,000	..	2,008 5 11	2,008 5 11
3	Pumping plant ..	6,600	..	..	..
4	Rising main ..	1,500	..	..	..
5	Staff quarters ..	8,000	..	..	..
6	Balancing tank including lay-out & watchman-quarters	9,000	..	3,589 4 10	3,589 4 10
7	Distribution ..	40,000	..	5,612 7 0	5,612 7 0
8	Petty establishment	2,500	..	1,084 15 7	1,084 15 7
9	Tools and plant ..	2,500	..	2,501 10 7	2,501 10 7
10	Contingencies ..	3,000	..	65 12 0	65 12 0
11	Chlorine plant ..	2,500	..	..	..
12	Gardens and gate ..	900	..	..	..
13	L.S. for unforeseen works ..	5,500	..	..	..
	Total ..	1,00,000	..	25,224 2 2	25,224 2 2

APPENDIX No. 13

Statement showing the Progress of House connections in the Towns during the yer 1847 Fsl.

Serial No.	Name of Water Works	SIZES OF CONNECTIONS							Total connection
		Year	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	1 $\frac{1}{2}$ "	2"	3"	
1	Jalna	At the end of:—							
		46 F.	916	10	2	..	..	..	928
		47 F.	968	10	2	..	..	..	975
2	Aurangabad	46 F.	1,201	9	6	1	..	..	1,217
		47 F.	1,271	10	6	1	1	..	1,289
3	Latur	46 F.	966	5	8	..	..	..	974
		47 F.	1,017	5	5	..	..	..	1,027
4	Raichur	46 F.	951	8	6	..	3	..	968
		47 F.	986	7	6	1	4	..	1,004
5	Gulburga	46 F.	1,187	53	28	2	..	3	1,223
		47 F.	1,219	38	26	2	..	3	1,288
6	Nander	46 F.	625	9	..	..	..	..	634
		47 F.	740	13	..	..	..	..	753
7	Serum	46 F.	10	..	..	..	..	..	10
		47 F.	140	..	..	..	..	..	140

APPENDIX No. 14.

Statement showing the Consumption of Water and Chemicals by the Towns during the year 1347 Faski.

Serial No.	Name of Water Works	Total quantity of water consumed by the Town during the year in gallons.	Population assumed	Quantity of water consumed by the Town per head per day in gallons	Quantity of alum consumed during the year in lbs.	Average dose of alum in grains per gallon of water	Quantity of chlorine consumed during the year in lbs.	Average dose of chlorine in parts per million parts of water	Remarks
1	Jalna ..	281,380,700	31,000	20	25,662	0.68	1,020	0.47	Bleaching Powder.
2	Aurangabad	29,64,85,000	30,000	27	275	..	1,136	..	
3	Latur ..	10,11,91,424	31,000	19	12,260	0.69	356	0.35	
4	Raichur ..	15,20,20,384	28,000	14.9	36,417	1.38	407	0.27	Bleaching Powder.
5	Gulburga ..	18,45,91,316	42,000	12	37,464	1.12	1,231	..	
6	Nander ..	12,67,94,730	27,000	12.8	8,530	0.4	491	0.39	
7	Serum ..	1,39,66,000	5,500	6.9	..	..	172	1.23	

APPENDIX No. 15.
Statement showing the cost of Maintenance of Jahna Water Works and Revenue realised from commencement to the end of 1947 Faski.

Serial No.	Year and months	EXPENDITURE INCURRED ON		Loan instalment	Contribution towards depreciation Fund	Total expenditure	Revenue realised	Balance to credit on deficit (8-5)
		Establishment	Works and Abwab Mukhtasa					
1	2	3	4	5	6	7	8	9
1	Azoor	692 8 0	..	..	..	692 8 0	3,720 11 5	..
2	Dai	1,423 8 0	..	..	..	1,423 8 0	638 8 0	..
3	Bahman	..	..	..	..	..	3,056 10 2	..
4	Isfandar	694 7 0	..	..	..	694 7 0	3,285 1 10	..
5	Farwardi	1,387 5 2	..	..	..	1,387 5 2	1,478 7 4	..
6	Ardebisheit	75 0 0	158 4 9	..	..	253 4 9	3,104 7 10	..
7	Khurdad	717 15 11	..	..	..	717 15 11	3,228 1 7	..
8	Thir	797 11 0	958 5 7	..	..	1,750 0 7	2,614 0 7	..
9	Amardad	778 10 0	1,670 15 2	..	..	2,449 9 2	2,883 0 3	..
10	Sherewar	747 0 2	128 2 7	..	..	875 2 9	3,154 10 6	..
11	Meler	715 0 0	..	..	..	715 0 0	1,508 10 8	..
12	Aban	1,655 1 10	785 12 2	17,828 0 0	7,000 0 0	26,718 14 0	6,238 0 4	..
Total for the year 1947 F.		9,642 3 1	3,646 8 3	17,828 0 0	7,000 0 0	37,616 11 4	34,895 6 6	—2,721 4 10
Total of previous years from the commencement of the works ..		48,130 14 0	19,942 14 1	36,854 0 0	..	99,927 12 1	115,53 7 5	15,615 11 4
Grand total to the end of 1947 F. from the commencement ..		52,778 1 1	28,589 6 4	54,182 0 0	7,000 0 0	1,37,544 7 5	1,50,488 13 11	12,894 6 6

APPENDIX No. 16.

Statement showing the cost of Maintenance of Aurangabad Water Works and Revenue realised from the commencement to the end of 1947 Fash.

Serial No.	Year and month	EXPENDITURE INCURRED ON		Loan instalment	Contribution towards depreciation Fund	Total expenditure	Revenue realised	Balance to credit of deficit (6-5)
		Establishment	Works and Abwab Muktasas					
1	2	3	4	5	6	7	8	
1	Azoor 1947 F.	783 0 0	85 1 0	..	733 0 0	1,175 8 3	..	..
2	Dal "	1,852 12 0	357 11 4	..	1,437 13 0	229 1 0	..	..
3	Bahman "	30 0 0	156 9 9	..	387 11 4	4,746 4 0	..	..
4	Isfander "	780 8 0	10 0 0	..	937 1 9	2,091 0 6	..	..
5	Kurwardi "	1,386 0 0	..	..	1,396 0 0	417 10 11	..	..
6	Ardebehsht "	..	299 9 10	..	..	5,089 10 9	..	..
7	Khurad "	1,323 5 1	188 0 0	..	1,622 14 11	2,030 1 10	..	..
8	Thir "	265 0 8	..	..	453 0 8	413 5 11	..	..
9	Amerdad "	1,156 10 8	..	..	1,156 10 8	5,398 3 10	..	..
10	Sherevar "	678 12 0	410 0 6	..	1,088 12 6	1,804 1 8	..	..
11	Meher "	664 0 0	387 8 7	..	1,051 3 7	239 5 6	..	..
12	Aban "	800 4 6	400 6 0	8,828 0 0	6000 0 0	5,439 10 4	..	..
Total for the year 1947 F.		9,170 4 11	2,271 9 4	8,828 0 0	26,264 14 3*	29,124 0 6	2,859 2 3	
Total of previous years from the commencement of the works		84,842 10 8	18,407 3 2	18,765 0 0	70,104 13 10	1,13,490 9 2	43,385 11 4	
Grand total to the end of 1947 F. from the commencement		44,012 15 7	15,768 12 6	27,593 0 0	96,369 12 1 1	42,614 9 8	46,244 13 7	

*Includes an amount of Rs. 3,000 towards Depreciation Charges for the year 1945 F.

APPENDIX No. 17.

Statement showing the cost of Maintenance of Latur Water Works and Revenue realised from the commencement to the end of 1947 F.

Serial No.	Year and months	EXPENDITURE INCURRED ON		Loan instalment	Contribution towards Depreciation Fund	Total expenditure	Revenue realised	Balance to credit or deficit (8-5)
		Establishment	Works and Abwab Muktasas					
1	2	3	4	5	6	7	8	
1	Azoor 1347 F.	698 12 0	..	..	698 12 0	109 8 0	..
2	Dai "	563 12 0	..	..	563 12 0	155 11 2	..
3	Bahman "	482 8 10	..	..	482 8 10	405 10 0	..
4	Lafander "	512 11 0	..	..	512 11 0	2,437 10 0	..
5	Farwardi "	1,087 3 0	2,220 9 4	..	3,907 12 4	1,775 8 9	..	
6	Arilbehishit "	1,285 12 0	..	..	1,285 12 0	1,737 9 4	..
7	Khurdad "	40 0 0	524 10 6	..	564 10 6	3,965 8 0	..	
8	Thir "	767 3 0	2,468 6 5	..	3,235 9 5	2,181 2 0	..	
9	Amardad "	972 8 0	297 0 0	..	1,269 8 0	1,819 8 0	..	
10	Sherwar "	960 11 7	..	..	960 11 7	3,206 11 2	..
11	Mehar "	819 4 0	361 9 5	..	1,180 13 5	4,454 0 0	..	
12	Aban "	1,670 3 5	2,385 7 5	..	27,185 10 10	7,749 5 1	..	
Total for the year 1347 F.		10,460 8 10	8,257 11 1	13,130 0 0	10,000 0 0	41,843 3 11	29,997 11 6	—11,850 8 5
Total of previous years from the commencement of the works		25,037 2 6	22,330 9 4 ⁵ / ₆	84,000 0 0	..	81,967 11 10 ⁵ / ₆	70,451 13 4	—4,915 13 8 ⁵ / ₆
Grand total to the end of 1347 F. from the commencement		35,497 11 4	80,588 4 5 ⁵ / ₆	47,130 0 0	10,000 0 0	1,23,215 15 9 ⁵ / ₆	1,06,449 8 10	—16,766 4 11 ⁵ / ₆

APPENDIX No. 18.

Statement showing the cost of Maintenance of Raichur Water Works and Revenue realised from the commencement to the end of 1347 Fasl.

Serial No.	Year and months	EXPENDITURE INCURRED ON			Loan instalment	Contribution towards Depreciation Fund	Total expenditure	Revenue realised	Balance to credit or deficit (6-5)
		Establishment	Works and Abwabs Mukataba						
1	2	3	4	5	6	7	8		
1	Azur	1,583	6	8	2,937	14	4	1,511	0 0
2	Daj	804	14	1	..	..	..	804	14 1
3	Bahman	168	5	6	2,408	13	6	2,372	3 0
4	Isfandar	921	1	1	5,689	10	5	6,610	11 6
5	Farwardi	1,530	9	2	2,168	6	1	3,695	15 3
6	Ardebilshih	53	1	0	2,627	8	5	2,680	9 5
7	Khurdad	728	4	0	3,808	8	7	4,036	12 7
8	Thir	1,743	9	7	764	13	4	2,498	6 11
9	Amerdad	814	2	10	3,415	7	4	4,229	10 2
10	Shchrewar	838	14	10	5,120	14	10	5,954	13 8
11	Meher	951	8	2	332	8	6	1,294	0 8
12	Aban	878	10	2	4,937	8	7	37,941	2 9
		..	..	..	20,105	0	0	+24,00	0 0
	Total for the year 1347 F.	10,996	7	1	38,762	1	11	1,00,863	9 0
	Total of previous years from the commencement of works	24,271	3	0	67,928	2	3	1,34,960	5 3
	Grand total to the end of 1347 F. from the commencement	35,267	10	1	1,01,690	4	2	2,35,823	14 3

*The Depreciation Charges for 1343 and 1346 F. were transacted in 1347 F.

60,689 8 7

31,174 0 5

66,712 10 9

99,421 10 11

1,36,402 3 4

APPENDIX No. 19.

Statement showing the cost of Maintenance of Gulbarga Water Works and Revenue realised from the commencement to the end of 1347 Fasl.

Serial No.	Year and months	EXPENDITURE INCURRED ON			Loan instalment	Contribution towards Depreciation Fund	Total expenditure	Revenue realised	Balance to credit or deficit (6-5)
		Establishment	Works and Abwab Mukhtasa						
1	2	3		4	5	6	7	8	
1	Azoor	1,127 8 0	..	..	..	1,127 8 0	738 8 11	..	
2	Dai	559 4 0	..	..	..	559 4 0	406 5 0	..	
3	Bahman	6 2 0	..	..	..	6 0 2	367 3 8	..	
4	Isfandar	621 10 0	455 0 0	..	..	1,076 10 0	109 0 7	..	
5	Farwardi	1,69 6 0	49 8 0	..	..	1,218 14 0	672 5 3	..	
6	Ardibehisht	194 9 0	2,373 12 4	..	..	2,568 5 4	325 2 2	..	
7	Khurdad	681 10 8	485 12 8	..	..	1,117 7 4	580 3 7	..	
8	Thir	592 0 4	..	..	..	592 0 1	1,050 0 1	..	
9	Amardad	621 3 2	205 1 4	..	..	826 4 6	2,638 15 0	..	
10	Shehresar	590 9 4	850 12 2	..	..	1,441 5 6	3,872 5 4	..	
11	Meher	1,022 3 11	416 3 5	..	..	1,438 7 4	6,846 1 11	..	
12	Aban	580 6 4	1,467 15 3	..	..	2,048 5 7	8,127 4 10	..	
Total for the year 1347 F.		7,716 6 11	6,904 1 2	..	..	14,020 8 1	26,443 8 4 946 10 0	13,369 10 3	
Total of previous years from the commencement of the works ..		19,761 15 4	18,156 5 1½	..	..	37,921 4 5½	48,183 8 2	10,262 3 8½	
Grand total to the end of 1347 F. from the commencement ..		27,481 6 3	24,460 6 3½	..	..	51,941 12 6½	74,027 0 6	23,631 13 11½	

APPENDIX No. 20.

Statement showing the cost of Maintenance of Nanded Water Works and Revenue realised from commencement to the end of 1947 Fash.

Serial No.	Year and months	EXPENDITURE INCURRED ON			Loan instalment	Contribution towards depreciation fund	Total expenditure	Revenue realised	Balance to credit or deficit (4-5)
		Establishment	Works and Alwabs	Muktasa					
1	2	3	4	5	6	7	8	9	
1	Azoooy	1,243 14 3					1,243 14 3	1,071 12 3	..
2	Dal	644 3 9	578 7 0	..	..	..	1,222 10 9	585 0 6	..
3	Behman	49 0 0	606 1 6	..	..	..	655 1 6	1,296 8 0	..
4	Isfandar	688 0 0	593 5 0	..	..	..	1,281 5 0	2,563 6 8	..
5	Farwardi	1,327 14 8	799 10 8	..	..	..	2,227 9 4	898 0 0	..
6	Ardibehisht	28 6 0	643 8 10	..	..	..	676 14 10	824 10 6	..
7	Khurdad	890 14 3	669 6 0	..	..	..	1,560 4 3	5,618 7 5	..
8	Thir	745 0 0	2,444 9 11	..	..	..	3,189 9 11	1,946 0 3	..
9	Amardad	661 1 10	1,000 2 0	..	..	..	1,661 3 10	2,906 2 0	..
10	Shetrewar	694 13 2	851 10 7	..	..	..	1,546 7 9	1,863 5 2	..
11	Meher	606 10 11	..	..	..	..	606 10 11	437 6 8	..
12	Aban	2,097 13 5	2,917 14 2	..	..	..	5,015 11 7	4,327 2 3	..
Total for the year 1947 F.		9,777 12 3	11,109 12 5	..	..	..	20,887 8 8	24,370 13 8	3,483 5 0
Total of previous years from the commencement of the work ..		5,560 14 0	5,320 8 9	..	..	..	11,080 6 9	13,720 5 2	2,639 14 5
Grand total to the end of 1947 F. from the commencement ..		15,328 10 3	16,639 5 2	..	..	..	31,967 15 5	38,091 2 10	6,123 8 5

N.B.—Loan and depreciation charges have not been accounted for 1946 and 1947 F

APPENDIX No. 21.

Statement showing the cost of Maintenance of Seram Water Works and Revenue realised from commencement to the end of 1947 Fasil.

Seri- al No.	Year and months	EXPENDITURE INCURRED ON			Loan instalment	Contribution towards Depreciation Fund	Total expenditure	Revenue realised	Balance to credit or deficit (6-5)
		Establishment	Works and Abwab Muktasa						
1	2	3	4	5	6	7	8	9	
1	Azur	..	..	..	..	..	..	..	..
2	Dai	..	..	..	..	..	..	..	..
3	Bahman	55 0 0	44 10 10	..	..	99 10 10	..	..	..
4	Isfandar	56 5 8	133 9 11	..	..	189 15 7	..	..	..
5	Farwardi	106 9 0	28 8 8	..	..	135 1 8	..	..	..
6	Ardibehist	187 0 0	..	..	..	187 0 0	728 0 0	..	..
7	Khurdad	158 15 0	342 13 2	..	..	501 12 2	184 0 0	..	..
8	Thir	97 18 0	70 8 0	..	..	168 0 0	84 0 0	..	..
9	Amardad	99 9 0	54 8 0	..	..	154 1 0	68 0 0	..	..
10	Shehrewar	105 7 2	29 12 2	..	..	135 3 0	..	..	..
11	Mahir	92 0 0	186 5 0	..	..	278 5 0	190 0 0	..	..
12	Aban	92 0 0	81 0 0	..	..	123 0 0	601 0 0	..	..
	Total for the year 1947 F.	1,000 10 10	921 6 3	..	..	1,022 1 3	1,858 0 0	..	64 1
	Total of previous years from commencement of works	..	..	..	..	..	..	..	..
	Grand total to the end of 1947 F. from the commencement.	1,000 10 10	921 6 5	..	..	1,022 1 3	1,858 0 0	..	64 1 3